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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,719	02/15/2005	Oskar Pacher	PACHER-2	8384

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EXAMINER	
YANG, JIE	

ART UNIT	PAPER NUMBER
1742	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,719	PACHER ET AL.	
	Examiner	Art Unit	
	Jie Yang	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/15/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledge of the receipt of "applicant argument/remarks" filed on 02/15/2005. Original claims 1-10 are amended from original claims, and Claims 1-10 are pending in application.

Priority

PCT application claims foreign priority benefit of the filing date of foreign application (DE10333272.3, Date: July 21, 2003) is approved in condition of submitting a certified translation, without a certified translation, the effective filing date of this case is the 371 date. Claims foreign priority benefit of the filing date of foreign application (DE10237446.5, Date: Aug. 16, 2002) is denied, because DE10237446.5 includes new matters, which were not disclosed from instant parent application. For example: Fig. 1-3, tables I and II in DE10237446.5, which were not disclosed from instant application. Claims 1-10 are not entitled to the filing date of the foreign application date of DE10237446.5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable Tento Masayuki et al (JP 11-302737, thereafter 'JP737) in view of Katagiri et al (US 6,544,356 B2, thereafter '356) and Bilgen et al (US 6,939,418, thereafter '418).

Regard to claims 1-3, 'JP737 teaches a stainless steel excellent in corrosion resistance (Abstract of JP737). The composition comparing listed in following table. The major compositions disclosed by 'JP737 overlaps the composition of the instant invention, which is a prima facie case of obviousness. SEE MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to select the claimed compositions of Cr, C, Si, Mn, Ni, Mo, Cu, N from the composition disclosed by 'JP737 because 'JP737 discloses the same utility throughout the disclosed ranges.

But 'JP737 silences about Ti, Nb and V. '356 teaches a high-Cr ferritic stainless steel with high strength (Col.2, line 51-57). '356 teaches composition range of each Ti, Nb, and V from 0.08 to 0.4%wt. This composition range overlaps the composition range recited in instant claim. Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to add suitable amount Ti, Nb, and V in high-Cr ferritic stainless steel as demonstrated in '356 in process of 'JP737 to improve both a room-temperature strength and a high-temperature strength without causing poor formability and weldability (Col.5, line 44-53).

Element	From instant Claim 1 (in wt%)	'JP737 (in wt%)	Overlapping range (in wt%)
C	0.03-0.12	0.005-0.1	0.03-0.1
Cr	13-20	8-17	13-17
Si	0.2-0.9	0.05-1.5	0.2-0.9
Mn	0.3-1	0.05-1.5	0.3-1
Ni	0-0.5	0.05-1	0.05-0.5
Mo	0.1-2	0.1-2.5	0.1-2
Cu	0.05-1.0	0.1-2.5	0.1-1
N	0.02-0.5	0-0.05	0.02-0.05
Ti	0-0.01	-	-
Nb	0.01-1.0	-	-
V	0.02-0.25	-	-
Fe	Balance	Balance	Balance

'JP737 teaches inexpensive stainless steel strip for building structure, but it does not explicitly state for spring element application. '418 teaches a process for thermomechanical treatment of steel for torsionally-strained spring elements (Abstract of '418). '418 teaches silicon-chromium steel like 58SiCrV6 is suitable for this application (Col.3, line 49-60 of '418). Alloy recited in instant application is a kind of silicon-chromium steel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to apply ferritic chromium alloy with the composition of 'JP737 in view of '356 on spring element application since the silicon-chromium steel is suitable for making spring elements as evidenced by '418.

Regard to claim 4, coercive force and magnetic saturation are properties that are depended on alloy composition and heat treatment process. Because 'JP737 and '365 overlap the range with claim 4 in alloy composition, and '418 teaches the similar heat treatment process as recited in application disclosing (Fig.1, Claims 1-11, Col.3, line 31-60 of '418), the specific properties like coercive force and magnetic saturation would be inherently obtained. See MPEP 2112.01.

Regard to claims 7-9, 'JP737 does not explicitly states damping performance adjusted by solution annealing, cold forming, and tempering. '418 teaches a process for thermomechanical treatment of steel for torsionally-strained spring elements (Abstract of '226 of '418). '418 teaches the steel is solutionized in the austenite range at temperature 1050 to 1200°C (Col.1, line 39-40 of '418), and more specifically: heating to 1080°C and hold for a short time to avoid austenite crystallite growing (Col.3, line 30-40 of '418). '418 teaches multi-forming the alloy above the recrystallization temperature (Col.1, line 41-47, claim 9 of '418) and more specifically: a

total logarithmic amount of deformation of at least 0.1 is reached. '418 further teaches after quenching the rolled product, tempering process is performed (Col.1, line 48-49, claim 10-11 of '418), and more specifically, subsequent tempering to a temperature of roughly 380°C (Col.3, line 45-48 of '418). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose proper heat treatment and forming parameters for the spring element as demonstrated in '418 in process of 'JP737 to get the desired strength-toughness combination (Col.2, line 35-37 of '418).

Claims 5-6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable 'JP737) in view of '356 and '418 as applied in claims 1-4, 7-9 and further in view of Baba (JP 60-213246, thereafter 'JP246).

Regard to claims 5-6, and 10, 'JP737 does not explicitly state applying thermosetting powder coating on spring element. 'JP246 teaches a thermosetting powder coating on leaf spring with thermally curing to enhance the heat resistance and the wear resistance (Abstract of 'JP246) and the thickness of coating film from 0.01 to 1 mm (Page 216, 4th paragraph), more specifically, 0.1 mm film and curing at 200°C for 60 min.(example 1 of 'JP246). Film thickness and curing temperature within the

thickness and curing temperature range recited in instant claims. As thermosetting powder coating on spring element is a particular known technique as demonstrated in 'JP246, the claims would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to using thermosetting powder coating as demonstrated in 'JP246 in process of 'JP737 to enhance the heat resistance and the wear resistance (Abstract of 'JP246).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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